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(54) Title: POROUS MOLECULARLY IMPRINTED POLYMER MEMBRANES

(57) **Abstract:** Highly porous substance-selective polymeric membranes are produced by co-polymerisation of functional monomers and cross-linker in the presence of template, plasticiser (non-extractable component), and pore-forming component (extractable component). Extraction of the template and porogen molecules leads to the formation of small (< 100 nm) and large (> 500 nm) pores, including small pores having a shape and arrangement of functional groups complementary to the template molecule. The membranes possess enhanced affinity towards the template and its analogues and also have high flexibility and porosity. Such membranes can be used in analytical chemistry (as sensor elements and for solid-phase extraction materials) for applications in pharmacology, medicine, the food industry, water purification and environmental clean up.

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